

THE  
**AMERICAN PRACTITIONER:**

A MONTHLY JOURNAL OF

**MEDICINE AND SURGERY.**

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## THE AMERICAN PRACTITIONER:

A MONTHLY JOURNAL OF

## MEDICINE AND SURGERY.

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# THE AMERICAN PRACTITIONER.

APRIL, 1874.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

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## Original Communications.

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### PUERPERAL INSANITY.\*

BY J. B. STONEHOUSE, M. D.,

*Formerly Assistant Physician to Sanford Hall, Flushing, L. I.*

A consideration of puerperal insanity is interesting from the rarity of its occurrence, the absence or obscurity of its premonitory symptoms, the difficulty of treatment, the uncertainty and often fearful termination of the disease.

According to the strict significance of the term puerperal insanity, this article could treat only of those cases which occur during or within a few days or weeks after delivery; but by usage it has come to include instances of mental derangement originating during the periods of utero-gestation, parturition, and lactation. The late Dr. Skel, in the *Morrisonian Lectures* for 1873, published in the *London Journal of Mental Science* for October, 1873, abandons the term, and divides it into puerperal insanity, insanity of lactation, and insanity of pregnancy. While the term is decidedly an inap-

\* Read before the Albany County Medical Society, February, 1874.

propriate one, it is necessary to treat of these cases together, because of the intimate connection of these three physiological stages, and the almost inseparable connection of their etiology and pathology. The most usual division of the subject is according to the periods of pregnancy, labor and its consecutive state, and lactation. Another division is ephemeral insanity, melancholia, and mania. The latter classification is faulty, because it does not take cognizance of the peculiar circumstances under which the disease is developed, and dependent upon which is the treatment and prognosis. We will then consider insanity of pregnancy, puerperal insanity, and insanity of lactation.

The period of pregnancy is understood to extend from conception to delivery, the period of labor from labor to the end of the second month, and the period of lactation from the second month after delivery.

Of the fifteen cases of puerperal insanity upon the consideration of which I found these remarks I propose to offer, thirteen were married women; ten were between the ages of twenty and forty, three were under twenty, and two had passed forty; eight were primiparæ, four cases occurred during the second pregnancy, one during the third, one the fifth, and one the eighth; the youngest was eighteen, the oldest forty-seven years of age; in four cases there was history of heredity, the insanity in all cases occurring on the maternal side; in five cases hereditary neuroses other than insanity were found, and in the remaining six no heredity could be traced; in six cases the patient had suffered from nervous disease previous to the attack, and in one case an attack of chorea ceased as the mental symptoms came on; two cases proved fatal, one from dysentery and one from maniacal exhaustion; four cases are at present in institutions, and considered incurable; nine are recovered; of the four incurable cases, one is in a condition of dementia, and the others are classed as suffering from chronic mania; of the fifteen cases, six



occurred during pregnancy, three during labor, and six during lactation.

Now allow me briefly to detail the cases which appear to me to be representative of the several varieties, course, and termination.

CASE I. H. J. P., aged thirty years, second pregnancy, married five years. Patient exhibited symptoms of mental aberration during the fourth month of pregnancy; fears of poverty and death, with perverted appetite, craving raw meat, etc. Symptoms developed rapidly, and from the fifth month to the time of labor the patient continued in a condition of extreme melancholia without suicidal propensities. During labor, however, she exhibited considerable interest, and immediately took the child to breast, and to the close of lactation showed no other symptoms of mental disturbance. The patient has suffered several times from very severe hemicrania. Parents and collaterals free from any nervous taint, while they are decidedly phthisical. This patient entered an institution during the fifth month of her pregnancy, and was discharged one month afterward.

CASE II. G. S., German, aged twenty-three years, married one year, primipara. During an instrumental delivery she became violently excited, charged her husband with attempts to murder her with the forceps, and tried to choke the physician while applying the bandage. It became necessary to use the camisole for the safety of the household. Under medical treatment she quickly recovered her former mental condition, having been deranged and under restraint for about two weeks. She did not nurse the child. She is again pregnant. No heredity could be traced, and no nervous affections in her previous history.

CASE III. Deliah H., aged thirty-nine years, married two years, first pregnancy. During utero-gestation the patient was very suspicious and apparently very religious; was not considered by her relatives to be in sound mind. Labor was

not very difficult nor marked by any special mental symptoms. During lactation patient complained of headache in the frontal region. Anæsthesia, partial, was noticeable for a few days at several periods. Mental symptoms increased in intensity, several attempts were made at suicide, and in the fourth month after delivery, by advice of the family physician, she was removed to an asylum. A year has passed, and the patient is in a state of profound dementia. During the past summer she suffered from a severe dysentery, and became extremely debilitated and had bed-sores. Following this was an obstinate constipation with atony of the bladder. I have heard from the patient lately, and there is no hope of her recovery.

CASE IV. L. F., of German descent, aged eighteen years, unmarried, primipara. The patient was of a wealthy family and the oldest of eight children, three of whom suffered from epilepsy and two died in infancy from convulsions. Patient was first attacked when she was ten years old. Her mother and several other relatives on the mother's side also give histories of nervous heredity, while a brother and aunt of the mother died at an asylum of epileptic insanity. The patient being of weak mind and morals fell an easy prey to a man much her senior. During pregnancy she exhibited no unusual mental symptoms. During labor, however, she became wild and incoherent in her talk. In the course of a week she was dangerous to herself and attendants, requiring the use of the camisole continually. The fauces became extremely congested and swollen from the violent and constant screaming. Insomnia was almost unmanageable, and only while under the effects of the most powerful soporifics did she rest from her delirium. Forty-five grains of chloral and a drachm of the saturated tincture of hyoscyamus would scarcely produce rest for half an hour. Beef-tea, whisky-punch, and medicine were given, either by stomach-pump or by enema, according to the excitement of the patient. Hypodermic

injections of morphia, even to the extent of half a grain, produced no effect, although repeated within an hour. On the thirteenth day after labor the patient died from exhaustion.

CASE V. M. E. P., aged twenty-seven years, married, primipara, family strongly nervous. During pregnancy premature labor was threatened twice. Labor was without any specially unfavorable symptoms. In the fifth week of lactation the patient first showed signs of mental aberration, refused food, could not be induced to utter a word. Fæces and urine were passed apparently without her knowledge. She sat in her chair with her hands upon her knees, her eyes cast upward, and her mouth open. It became necessary to force alimentation and medication. Extreme insomnia and debility also further complicated the case. Under treatment she became steadily better until the third month of lactation, when she was discharged cured.

A few words as to the etiology of these affections. In Westminster and Queen Charlotte's hospitals, London, among fifty-five hundred women confined, only twenty were attacked with the disease during their residence in these institutions, and in others the proportion has been smaller. These facts, however, do not show the whole number attacked. As the time spent in lying-in hospitals after delivery is usually very short, and those women attacked with insanity during pregnancy are seldom, if ever, delivered at an institution. Dr. Gundry, from collected cases, gives 1,434 cases of puerperal insanity in 16,109 cases admitted to insane asylums.

Among the causes hereditary predisposition appears to be the most important. This heredity, not only to insanity but to other nervous disease, it is important to remember as occurring generally on the maternal side. Dr. McDonald reported sixty-six cases, seventeen of which, or about twenty-five per cent, gave histories of family predisposition. Dr. Gundry reports twenty-two out of fifty-six patients, or about fifty per cent, who were predisposed by heredity. Of my

own cases four were descended from families with undoubted taint of insanity, or about thirty-three per cent. This gives an aggregate of one hundred and thirty-seven patients, of whom forty-three were predisposed to insanity.

Constitutions enfeebled by alcoholic or sexual excesses, or by organic disease, are predisposed to attacks of puerperal insanity. Another important but decidedly difficult point to observe is the moral and mental habits and surroundings of the patient; and perhaps it is well to notice here the fact, presented especially by the French alienists, that unmarried women are much more liable to attacks of puerperal insanity than the married ones. The sad amount of illegitimacy which is said to exist in Paris has added greatly to the number of these insane during the periods under consideration. The injurious effects of painful emotions were so well known in ancient Rome that it was the custom to suspend a crown from the doors of houses where women were in labor to indicate that such houses were to be held sacred from all intrusion. It is difficult to estimate the effects of education and culture in this phase of insanity. Statistics on this point are meager and unsatisfactory, but I think I may safely say that, allowing the manner of living to be in two cases equally conducive to physical health, the better educated woman is the least liable to puerperal insanity. Under this head may be classed those cases where the attack is immediately preceded and evidently caused by some powerful mental impression, and also many cases which arise during instrumental deliveries. Dr. Marcé attributes puerperal insanity to the constitutional disturbance attendant upon pregnancy and the establishment of the lacteal secretion, and to the general shock to the nervous system which is the direct consequence of labor. Dr. Gooch's theory of its dependence upon the peculiar state of the sexual system which occurs after delivery, and Dr. Storer's *reflex insanity*, are all of similar explanation, and deserve careful attention in deciding the causation of the disease.

A writer in Winslow's Psychological Journal gives another very similar explanation. He attributes the origin of the mental aberration "to reactions between a system predisposed to such derangements and the normal physiological conditions which are found after confinement; just as in constitutions predisposed to tetanus or nervous delirium these will be developed after the slightest accidents or operations." The special influence of the physiological changes undergone by the uterine and nervous systems is a very interesting field for study. During pregnancy new functions are assumed, new relations between the nervous centers and the growth and nutrition of the uterus are being formed. The not uncommon advent of diseases of the kidneys, lungs, etc.; the change of habits necessitated by the conditions of the patient—all culminating in the peculiar and supreme nerve tension of the stage of labor, followed immediately, it may be, by exhaustive hemorrhages and the drain of lactation—form a chain of causes whose existence renders the escape of a single woman mysterious and providential. Dr. Marshall Hall claimed for anæmia and exhaustion the principal places in the causation of puerperal insanity. Undoubtedly these conditions enter into many cases, but the claim can not be substantiated. Sir James Y. Simpson raised the point of the connection of puerperal insanity with albuminuria. The statistics of observers do not show any proofs of this theory, and in the three cases of my fifteen in which this question was investigated no traces of albumen could be detected.

The symptoms of the three varieties of puerperal insanity do not present any very characteristic points. Melancholia is most frequently the type of the disease in the period of pregnancy; perverted appetites, suspicions, fears, and perversion of the moral element is often noticeable. Dr. Bucknill says: "Every medical man has observed the extraordinary amount of obscenity which breaks forth from the most modest and well-nurtured woman under the influence of puerperal

mania; and although it may be courteous and politic to join in the wonder of those around that such impurities could ever enter such a mind, and while he repudiates Pope's slander that 'every woman is at heart a rake,' he will nevertheless acknowledge that religious and moral principles alone give strength to the female mind; and that when these are weakened or removed by disease, the subterranean fires become active and the crater gives forth smoke and flame."

Dr. Marcé gives the case of a woman who became hydrophobic soon after conception. She could neither drink nor bear any one else to do so in her hearing, nor could she cross a stream of water.

Of one hundred and fifty-five cases collected by Dr. J. Batty Tuke, twenty-eight occurred during pregnancy, over twenty per cent. In my cases six occurred during pregnancy. Of seven hundred and eighty-three cases reported by McDonald, Gundry, Marcé, and others, only sixty-five cases occurred during utero-gestation. Of Dr. Tuke's one hundred and fifty-five cases, seventy-three occurred during the period of labor; of my fifteen cases, three occurred during labor. The mental symptoms are generally of the maniacal type, and may be either ephemeral, occurring during the passage of the head from the os uteri or from the os externum, or it may come on later and last longer. Fifty-four of Dr. Tuke's cases and six of my own occurred during lactation. The melancholic type predominates during this period.

Puerperal insanity is the most favorable for recovery, while insanity of lactation is least so. The prognosis is unfavorable when inflammatory conditions accompany or supervene upon the mental aberration; when the strength of the patient is diminished by organic disease, exhaustive discharges, and maniacal excitement.

The treatment differs very little from that of other similar cases of non-*puerperal* insanity. Where it is possible narcotics should be avoided in the treatment of *puerperal* insanity, is



the statement of Sir Jas. Y. Simpson; warm baths and alcoholic drinks serving to quiet the patient and procure sleep. This is not always possible, and then chloral, bromide of potassium, conium, and opium may be relied on. A useful combination is a solution of chloral with a saturated tincture of hyoscyamus. The non-appearance of the menses at the normal period should be considered an indication for medication to that end. Tonics, stimulants, and nutritive articles of food should be given when called for by the condition of the patient. Blisters and other counter-irritants are often of the greatest importance.

NEW YORK.

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## SUGGESTIVE CASES TREATED BY ELECTRICITY.

BY GEORGE M. BEARD, M. D.

One of the ablest general practitioners that I ever knew, a gentleman of somewhat advanced life and of immense experience, remarked to me the other day that he was continually meeting with unexpected forms of disease, and that almost every case taught him something new. If this be true of the experience of general practitioners, it is just as true of specialists. The electro-therapeutist is always learning. Even his failures are instructive; cases that are poor in results may be rich in suggestion. Every step of our march is a fresh surprise. Indeed I may say that the larger and more varied the experience the more fruitful and suggestive each new experience becomes.

The following cases all taught me something, and their brief recital may perhaps be of service to others.

ATROPHY OF THE UTERUS—SCANTY MENSTRUATION—STERILITY—INCREASE IN THE SIZE OF THE ORGAN AND IN THE AMOUNT OF THE MENSTRUAL FLOW UNDER INTERNAL FARADIZATION AND CENTRAL GALVANIZATION AND GENERAL FARADIZATION.

Mrs. P., a young married lady, was referred to me, January 17, 1872, by Dr. Fordyce Barker, for the symptom of sterility. According to Dr. Barker's diagnosis there was atrophy of the uterus, and he was in the hope that electrization might, by improving the nutrition of the uterus, perhaps remove the sterility. It was supposed also that there might be atrophy of all the generative organs, since the menstruation was defective, though regular, and the patient was withal quite anæmic. I treated the patient for six weeks by internal faradization of the uterus, with my intra-uterine electrode, through the speculum; external faradization over the back and the region of the ovaries; general faradization and central galvanization occasionally. The patient came every other day. Internally she took iron and strychnine.

At the first menses after treatment the patient remarked an increase of quantity, and the courses were on her one day longer than usual. By the 1st of March, after six weeks' treatment, Dr. Barker found on examination that the uterus had increased in length one quarter of an inch. The patient after an interval was again treated, but without any further local improvement.

The modification of nutrition caused by electricity may have two opposite effects; it may cause increase or it may cause diminution in the size of a part or organ. Where the part is abnormally large it causes it to grow smaller; where it is abnormally small or atrophied, as in the above case, it causes it to grow larger. In these opposite results there is nothing inconsistent; they are readily explained by the changes in nutrition caused by the current.

FACIAL SPASM OF ONE YEAR'S STANDING AGGRAVATED AT THE MONTHLY PERIODS—DECIDED TEMPORARY RELIEF UNDER LOCAL AND CENTRAL GALVANIZATION.

Miss F., a young lady twenty-four years of age, was referred to me by Dr. Dudley, December 12, 1871. The patient had suffered for one year from spasm of the muscles by the side of the nose, and also of the orbicularis on both sides. The spasms varied with the general health; that is, they seemed to grow *worse as the general condition improved*. Just before and during the monthly periods they were usually much worse.

I tried local galvanization with very mild currents, alternating with central galvanization. Strong or even medium currents at once aggravated the spasm, while mild and short applications at once gave relief. There was, however, a continual tendency to relapse. Perhaps a week or more she would be apparently well, then the spasms would return in full force. I treated her by intervals for months with no more than temporary benefit.

The above case suggests two thoughts: 1. That functional disturbances in women are usually worse at or just before the time of the menses; 2. That local spasmodic affections of a chronic character, though they may be speedily relieved by electricity, are yet very relapsable. This is true of all local and long-standing spasmodic affections, wherever situated. When these affections are recent and mild they may be permanently cured by a skillful use of electricity; but inasmuch as they are comparatively painless affections, and steal upon the patient like a thief in the night, they but rarely come under the care of the electro-therapeutist until they have existed for months and years. One reason why general chorea as it occurs in children gives way to electrical treatment is that it is almost always taken in hand much earlier than local chorea.

I may remark here that spasmodic affections of all kinds, local and general, chronic and recent, mild and severe, should usually be treated with *mild* currents, uninterrupted, and by short applications.

The following was one of those cases where electricity seemed to agree most happily with the *temperament* of the patient.

SUBACUTE RHEUMATISM COMPLICATED WITH NERVOUS DEBILITY OF THREE MONTHS' STANDING—IMMEDIATE RELIEF OF PAIN AND RAPID INCREASE OF STRENGTH UNDER THREE WEEKS OF GENERAL FARADIZATION AND CENTRAL GALVANIZATION.

Mr. H., aged thirty-five years, was referred to my care by Prof. C. A. Budd, October 22, 1872. Nervous rheumatism was a life-long heritage of the patient. The present attack seemed to have been excited by prostration from the heat of the sun about three months before. The patient on the day I first saw him was confined to his house and to his bed by stiffness, pain, and debility. His appetite was poor, he had lost some flesh, and sleep was obtained only by opiates. After the first application of general faradization, which was given in bed, he slept without opiate. Every application much relieved him. Central galvanization was used a part of the time, and seemed to do better than general faradization. Under the combined treatment he rapidly gained in strength, and soon was able to walk out. An attack of vomiting, brought on either by a too strong faradization or by the digitalis that he was taking, caused a relapse, from which he gradually recovered.

Cases like the above suggest the query whether there are not certain *temperaments* for which, without reference to the disease from which they suffer, electricity acts as a specific. More and more I am convinced that it is the temperament even more than the special symptom that is to be considered in all electrical treatment. I am disposed to believe that electricity would act well for Mr. H. in almost every conceivable form of disease, at least of the subacute or chronic character.

The necessity of making careful examination of the uterus in some obstinate forms of neuralgia is powerfully shown by the following experience.

FACIAL NEURALGIA OF LONG-STANDING DEPENDENT ON UTERINE DISEASE—  
NO RELIEF FROM LOCALIZED GALVANIZATION—GREAT RELIEF UNDER  
LOCAL TREATMENT OF THE UTERUS.

Miss R., a young lady about eighteen years of age, was referred to me, September, 1871, by Dr. Newton. The young patient was of a frail and nervous build, and for one year had been a sufferer from facial neuralgia of the right side that never let up. Sometimes the pain extended to the left side. For four years there had been more or less neuralgia, but for a year the pain had been constant. There was spinal irritation, more or less insomnia, and bad nutrition. I treated the sufferer by localized galvanization and faradization through the base of the brain, from one mastoid process to the other, and from the chin through the affected nerve. Central galvanization and general faradization also were used. There was no improvement. The mother of the patient now informed us that at one time there had been some uterine disorder, or, as she expressed it, "weakness or whites." I then took the case to Dr. A. J. Skene, who made a careful examination, and found vaginismus, or a condition approaching it, with antelexion probably of long-standing, and *uterine congestion*. Dr. Skene treated the patient locally in various ways, and soon there began to be remissions of pain for fifteen minutes. The intervals increased until the patient appeared entirely well. Months afterward there was, we learn, some relapse.

The following is typical of certain obstinate temperaments that every now and then cross the track of the electrotherapist.

SEVERE NEURALGIC PAINS IN LEGS, PROBABLY DUE TO CONGESTION OF CORD,  
ADVANCING TO SCLEROSIS, AGGRAVATED BY ERGOT AND NOT BENEFITED BY  
GALVANIZATION OF SPINE.

Mr. S., an engineer on one of the Union ferry-boats, was referred to me, April 14, 1873, by Dr. Conkling. The patient, who was forty-two years old, was of a strong and hardy frame, but in his past life had suffered much from what he

called gravel and kidney trouble. His calling as engineer—sometimes on night duty—caused him to be considerably exposed and to be physically overworked. The symptoms when he consulted me were severe neuralgic pains down both legs, unilateral sweating, and sweating over the lumbar vertebræ. The neuralgic pains were of a sharp, shooting, stabbing character, such as we see in spinal congestion and sclerosis. Overexertion and sitting up at night made the pains severe. Galvanization of the spine and general faradization seemed to have little permanent effect. A dose of ergot (one drachm of the fluid extract) caused a feeling of tingling and pricking in his legs, and also pain in his back. The patient abandoned treatment, his occupation being so much against him that there was little inducement to persevere.

Possibly in the above case the temperament contra-indicated electricity. It is generally possible to relieve the pains not only of spinal congestion, but of posterior spinal sclerosis, even when the disease is not permanently cured.

INJURY OF SHOULDER, STIFFNESS, AND PAIN—RAPID AND PERFECT CURE  
UNDER LOCAL GALVANIZATION.

The wife of a physician, a lady of middle life, consulted me, February 2, 1872, for an injury of the right shoulder of many months' standing. The stiffness was so great that she could not raise her arm to her head except with great difficulty. The pain was severe. Liniments had done nothing, or but little. About a month of treatment by local galvanization with strong currents—for she bore electricity well—gave rapid relief to the pain and stiffness and a permanent cure. The electrodes were applied all around the joint in all directions with wet sponges, and the application continued until the skin was quite red. The cure was complete, and there was no relapse.

In this case the electricity was borne in very large doses. There seemed to be no limit to the amount that she could receive without the injurious effects. In another similar case it might be necessary to use very gentle currents and only short applications.

INFLAMMATION OF CONJUNCTIVA FOLLOWING IRIDECTOMY—PERIODIC PAIN  
AND EXACERBATIONS—RELIEF UNDER GALVANIZATION.

Mrs. L., sister of a physician, was placed under my care by her brother, June 14, 1873. The patient, a lady of middle life, was a great sufferer every third day from exacerbations of pain and inflammation in an eye that had been operated on by iridectomy. I recommended and used galvanization, locally applied, for the purpose of relieving the symptoms. June 17th, the pain was relieved during the attack; June 23d, no regular exacerbation as yet; June 29th, an exacerbation, but less severe than usual, came on; July 7th, has had only one attack; July 21st, has not had an attack for a week. Later in the summer the

patient went to the country, when she again suffered, but in October she was again very much better.

In the above case two points are shown: 1. That *pain* as a symptom merely may be treated in cases that are of necessity incurable; 2. That periodic attacks may be aborted.

Sciatica in its relation to electro-therapeutics appears under two general forms: those which are quickly cured, and those that give way very slowly and under protracted treatment.

SEVERE AND OBSTINATE SCIATICA EXCITED BY OBSTRUCTION OF THE BOWELS—RELIEF AND SLOW IMPROVEMENT UNDER LOCALIZED GALVANIZATION WITH MOISTENED SPONGES, CLOTHS, WITH THE METALLIC BRUSH, AND GALVANO-PUNCTURE.

Mr. K., aged thirty-nine years, was referred to me, March 3, 1873, by Dr. Conkling. The patient had been occupied by various and complex affairs, and had been for years bearing the burdens of ten men. His vacations had been few and his hours of labor many, and he had fallen into a condition of profound neurasthenia. He had suffered from gastralgia of a most violent character, for which opiates had been quite freely given; and constipation and hardened feces had resulted that had caused obstruction of the bowels, which was relieved only with difficulty and by mechanical means.

The sciatica of one side, from which the patient was suffering when I was called in, seemed to be of a reflex character from the constipation. The pain was fearful, and there was, of course, lameness and atrophy of the muscles of the leg. At times excessive hyperæsthesia appeared over the thigh, especially in the region of the sciatic nerve, and there was great tenderness.

I tried various methods of electrization; general faradization, for the patient was much debilitated; localized faradization with sponges and with the metallic brush; central galvanization, that certainly was of service, generally and locally; localized galvanization, and galvano-puncture.

Localized galvanization with currents of medium strength, and continued for an hour or so just as the patient had retired for the night, seemed to be more efficacious than any other method or manner of treatment. Almost always it soothed the pain, relaxed the stiff and aching muscles, and this relief would last for hours, perhaps give a good night's sleep. The proceeding was to place one pole on the spine, and to pass the other, without regard to the direction of the current, up and down over the region of the sciatic nerve.

A few times I tried galvano-puncture with insulated and non-insulated needles. The needles were thrust in quickly and firmly until they came near the nerve, and sometimes they touched it, as was evidenced by the tingling and pricking sensations excited that were felt down the leg. The punctures were made on various points down the back part of the thigh. No anæsthetic was used, but once or twice local anæsthesia by means of carbolic acid and ether.

I was persuaded that this treatment by puncture did good; that it gave the patient a start, and enabled the external galvanization to do its work at better



advantage. The patient, though a man of strong will and decision, terribly dreaded the thought of the needles, and I was obliged to abandon their use. The needles were always connected with the negative pole, the positive being applied externally by a sponge or cloth cover.

This case was treated off and on for four months, and with slow and not very steady improvement. It was a long time before the patient could ride or sit long without causing pain. In a few weeks he completely recovered.

NO. 8 WEST THIRTY-SEVENTH STREET, NEW YORK.

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## ELECTROTHERAPY.

BY JOSEPH G. ROGERS, M. D.

For the advancement of this comparatively new though very important branch of medical science nothing is so much needed at present as the publication of clinical results. The extensive reports of Remak, Duchenne, Althaus, Hammond, Beard and Rockwell, and others constitute a rich mine of facts; but every practitioner who uses electricity can and should add his mite. With this thought in view the few following cases are offered.

CASE I. *Sciatica*.—A laundress, aged fifty years, ordinarily in good health, had suffered for three months from sciatica of right side, probably due to exposure to cold and moisture; often in bed for many days, and unable to work at any time. A descending current from ten cells, protracted during twenty minutes, gave almost entire relief for a day, after which the pain returned, but was less acute. Three days later another sitting produced a like result, the pain returning after some hours, but still less severely. Two weeks later two more

similar applications were made. After these the slight soreness then remaining gradually disappeared, and there has been no return of it during the year following. This case, which did not receive very regular attention, shows that the best effects of electrization often appear some time after the applications have been made.

CASE II. *Sciatica*.—I myself became a sufferer from this distressing neuralgia, four months since, as a consequence of a sudden wrench of the right thigh. Being desirous of studying the natural history of the disease, I permitted myself to suffer the extreme pain and lameness, without any effort at treatment, during a whole week; but then, being obliged to make a long journey, I concluded to try positive means, and made a twenty-minutes' application of a descending secondary faradic current. The next day the lameness was much lessened, and on the third it was gone. During this trip I was much exposed to cold, and was obliged to walk unusually much, but felt not a single twinge, nor have I since.

CASE III. *Coccygeal Neuralgia*.—A young lady, invalid for years with hip-joint disease and necrosis of shaft of femur, recovered from these troubles after an operation for enucleation. Some months later she was attacked with pain in the coccyx and extending down the sciatic nerve of the lame side. This gradually increased during two weeks, withstanding various means, external and internal, which were used to quell it. During a single night as much as three grains of morphia were required to procure sleep. On the fifteenth day, the pain being violent, a mild primary descending faradic current was applied for ten minutes, including the coccyx and whole of lame leg. During the application the pain disappeared; six hours afterward it came again. The next day an application was made during twenty minutes with the secondary current. The relief was more permanent. The patient slept well during the following night. A second

application next day of the same current caused complete cessation of the pain for a whole week. It then returned, after fatiguing exercise, with its original severity. Four bi-daily applications, however, entirely and permanently cured the trouble.

CASE IV. *Brachial Neuralgia*.—A middle-aged man, otherwise healthy, had been suffering for three months with pain along the course of the radial nerve, most intense at a point just between the first and second metacarpal bones. During this period the patient had taken various internal remedies of an anti-rheumatic nature, prescribed by his physician, with no effect whatever. His nights were often sleepless and manual labor was always painful. On his presenting his case to me I applied the secondary faradic current part of the time directly through the hand, and then again with the positive pole over the painful spots and the negative in the other hand. Five sittings within two weeks permanently cured the neuralgia, and there has been no recurrence, three months having since elapsed.

CASE V. *Peripheral Paralysis*.—A middle-aged laborer, under the influence of too much beer, slept several hours with one leg hanging over the sharp edge of his bed. On awaking he was unable to use that leg in walking, it being paralyzed below the knee and in a state of complete anæsthesia. After the lapse of a week he was able to walk, but only with great effort. The paralysis had given place to paresis, and the complete loss of sensation to a numbness, attended by a very painful tingling, which prevented the patient from sleeping. This condition remained during an additional period of two weeks; meantime he had no medical attention. Presenting himself to me at this time, I applied a strong secondary faradic current for twenty minutes, the electrodes being moved slowly to and fro over the entire surface of the leg in parallel lines a few inches apart during part of the sitting, and an ascending current being sent

through the popliteal nerve and its branches during the remainder. The improvement was immediate, and three daily applications entirely restored the limb to its normal condition.

CASE VI. *Spinal Congestion*.—A young man of healthy appearance presented himself with the following history. Five months before he had been exposed to intense and prolonged cold, and subsequently experienced a gradually increasing failure in general muscular power, attended by numbness of the extremities and tingling sensations in various parts of the body. There was also pain in the spine, increased by lying in a recumbent posture, headache, loss of appetite, constipation, and insomnia. These symptoms had persistently increased during the mentioned period. When first seen he had the "grip" of a feeble child, and could walk but very slowly and unsteadily. During two weeks I gave him ergot and bromide of potassium, with an occasional laxative pill. He slept better and had less back and headache; his appetite improved; the paresis and anæsthesia remained the same. At this time all medicine was stopped, and applications of the continuous descending galvanic current from ten cells were made—including the spine, extremities, and sympathetic system—twice a week for two weeks. Each sitting produced a very decided improvement in all the symptoms temporarily and to a less extent permanently. At this time the secondary faradic current was substituted for the galvanic, and the patient declared at once that it had a superior effect, increasing his power of motion and sensation in a very marked manner. This, in alternation with the galvanic, was used twice a week for four weeks. At the end of this time the patient declared himself well; and having been permitted to squeeze my hand instead of a dynamometer, forced me to accede to that proposition as far as applied to the resumption of normal muscular power. During the following six months he remained well; but a few days since he presented himself with the same

symptoms in a mild form. Under the same treatment as before he has already improved.

CASE VII. *Scapular Myalgia*.—A vigorous middle-aged brick-layer, after a violent struggle with a bellicose workman on a narrow scaffold forty feet high, found himself the next day suffering from great soreness and pain in the scapular region. This continued for a week, disabling him from work. Presenting himself for treatment at this time, I applied a descending primary faradic current over the disabled parts during ten minutes. Immediately there was almost complete relief, and another similar application later in the day dissipated the trouble permanently.

CASE VIII. *Cruval Neuralgia*.—A rather corpulent middle-aged man descending some steps suddenly felt a severe pain in the groin of one side, which was immediately followed by lameness of the thigh. This had been continuous during more than a year, when he was seen by Prof. Bartholow. He applied the continuous galvanic current one time with immediate benefit. This was not permanent, however. Two weeks later I began a course of electrization, which was continued rather irregularly during two or three months, having from one to three sittings a week. During this time I used at first the primary faradic, afterward the continuous galvanic, and lastly the secondary faradic current, always descending. After each sitting the range of comfortable motion was greatly increased and the pain almost entirely removed. This improvement was always more noticeable after the secondary current. At the end of three months' treatment under my hands the patient supplied himself with a faradic apparatus, and has since—a period of six months—occasionally made the applications himself. The improvement has been very slow but constant. No pain is now experienced except when the limb is strongly flexed or abducted. The temperature of the limb, which before was lower than that of the other side, is now normal. A perfect cure in this case is not

expected, but there has been very great benefit derived from the electrical treatment.

The few foregoing cases are cited mainly to support the statement that in my hands at least the secondary faradic current has exhibited more efficacy in the relief of neuralgia than the continuous galvanic, and at least as much in the merely congestive lesions of the spinal cord. In those conditions where there exists a more positive change in the nerve tissue—as in sclerosis, for instance—the greater electrolytic power of the galvanic current may be demanded; but in such cases we can scarcely expect benefit from any agent. Dr. Anstie, in the *Practitioner* of last June, declares very positively that faradization is worse than useless in neuralgia. Dr. Beard suggests that much depends on the smoothness of the current and the mildness of the application. The instruments used in the above cases were those of the Galvano-faradic Company, and the currents never painfully strong.

MADISON, IND.

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#### ON SOME OF THE THERAPEUTIC USES OF ARSENIC.\*

BY COLEMAN ROGERS, M. D.

Morgani has remarked that the habit of observation is the foundation of the healing art. It is one of the reproaches of modern medicine that its disciples are so prone to extol the virtues of new remedies, or at any rate those agents whose therapeutic value has not been demonstrated by clinical research and long experience. As a result of this the *materia medica* is filled with useless drugs, while many of the old remedies have fallen into unmerited neglect. Positive harm is thus done, first, by the multiplication of means for an end,

\* Read before the Louisville College of Physicians and Surgeons.



which causes doubt and confusion; and secondly, by leading us to overlook many of the agents used in the treatment of disease which have in times past afforded us and those who have preceded us most excellent results.

It is true that by careful trial, cautious and well-conducted experiment, our pharmacopœia has of late years been enriched by the addition of many new and valuable remedies. As an instance we need only cite the brilliant results obtained from the bromides in certain nervous affections, and from the chloral hydrate as a hypnotic. But it is none the less true that from hasty generalization, and attributing marvelous powers to certain medicines after observing their effects in only a few cases, we are burdened with much that is hurtful and more that is useless.

Our periodical literature teems with accounts of the high therapeutic value of various drugs, but how few of them retain a permanent place in the confidence of the profession generally! If we study carefully the pages of well-recognized authorities or consult our own experience, it is astonishing to find how rare are the instances in which direct curative effects can be attributed to any one drug. Read through, if you will, Flint or Watson, Aitken or Niemeyer, and it will be found that only in the instances of opium, quinine, and mercury can cure be said to follow the agent employed as a certain *post hoc ergo propter hoc*.

In the course of a recent able article contributed to the American Practitioner, entitled "Tolerance of Disease," Dr. Flint gives utterance to the following: "In the treatment of chronic diseases how few are the known remedies which are directly or specially curative! We have some such remedies: quinia and arsenic in malarial affections and in certain cases of neuralgia, mercury and the iodide of potassium in syphilis, the bromides in epilepsy, at once rise in the mind and bear testimony to the truth of this assertion, but it would be difficult to extend the list much."

Somewhere in the writings of Hughes Bennett that author gives a list of those agents which he considers positively curative, and if we remember correctly it embraces opium, quinine, mercury, iodide of potassium, and arsenic.

To one of these established remedies—arsenic—we propose to call attention, not by way of adding any thing new to what is known concerning its powers, but with the object of giving a summary of some of its important therapeutic uses, and directing particular attention to certain forms of disease in which it is indispensable, and to others in which its action has been invoked of late with results as gratifying as they are surprising.

If the long-standing of a remedy give any importance to it, arsenic is entitled to its share of attention, for as a medicinal agent it is as old almost as the hills from which it is extracted. Used long ago by Dioscorides as a remedy for cough, always a favorite drug with the Chinese, it reached its greatest celebrity, in 1786, in the hands of Fowler, an Englishman, as an antiperiodic in the treatment of malarial diseases. From this time it was generally taken up, and particularly by Haygarth, Jenkinson, and Begbie, until now we find its use extended to various and dissimilar morbid conditions, the sheet-anchor in some and an agent of superior efficacy in others. That it is destined to become one of our fixed and valuable resources must be manifest to all familiar with the medical literature of the past decade.

Arsenic as a remedy is not now confined to malarial and cutaneous diseases as formerly; but whether it is used in affections of the nervous system or those of the respiratory, circulatory, or digestive organs, or in uterine complaints, in whatever direction we turn we find those who attribute to it marked and manifest beneficial effects. Many of these observations may be founded upon an uncertain basis, and much of the laudation of the remedy may be traced to extravagant expectations; but where so much power is attrib-

uted to a drug under so many diverse conditions there must be several grains of truth somewhere.

Arsenic is credited with several peculiar modes of action. It is said to be a tonic, alterative, and antispasmodic, with special tendency to the nervous system, as a modifier of functional disturbance there, from whatever cause arising. It is difficult to determine in what its primary action consists or where it begins. It may be upon the blood, and through the blood upon the nerve-tissues, that we have to explain the favorable modification of nutrition which it is said attends its use. Headland asserts that it behaves as a catalytic in diseased states, removing from the blood and tissues any thing that is foreign to them, and in this way he explains its influence upon certain convulsive, malarial, and cutaneous diseases. By this catalysis no change takes place in the arsenic itself, but its simple presence furthers the removal of peccant matters.

It is not claimed that arsenic is a true tonic and restorative in the sense that iron is, for its existence as a proximate principle of the tissues has not been demonstrated. The salts of iron exist normally in the blood as constituents of the blood-corpuscles, the depots for the supply and conveyance of oxygen to the tissues. But from some recondite power authorities aver that arsenic in small doses increases the appetite; that under its influence the whole organism is invigorated, the muscular system rendered more active, and nutrition in general improved. These effects are the same, at any rate, as from the so-called true tonics, whether or not we may explain them on physiological principles. If it does not add any thing which is deficient or absent in the economy, by its bracing influence on the nervous and other tissues, it must diminish their susceptibility to disease on the approach of an exciting cause. In the role of a prophylactic it therefore plays a prominent part. Regarding its action upon the nerve-tissues, Hughlings Jackson has suggested that the

therapeutic virtues of arsenic in some of the neuroses may depend on its replacing phosphorus or some other isomorphous constituent of nerve-tissue which is rendered deficient in diseased conditions.

As indicative of the action of arsenic in improving the nutritive processes, Vogt instances its effects when administered to horses, a custom common among grooms in Vienna and other parts of Europe. Used upon these animals, it is said to improve their activity and powers of endurance, and give them a more glossy and healthy appearance. The observations of Van Tschudi, confirmed by MacLagan, upon the custom of arsenic-eating prevalent among the Styrian and Steyermark peasantry tend still further to bear out the conclusion that arsenic has remarkable power. These toxycophagi are in the habit of consuming every day what are considered poisonous doses of the mineral without bad effect. Indeed they claim that under its influence they are rendered longer-lived, that their appetite and color are improved, their endurance of fatigue and reaction against cold and other causes of disease increased, their muscular power augmented, their respiratory capacity enlarged, and their whole system placed in better condition.

In addition to these general effects arsenic is said to be a capillary stimulant, causing the contraction of vessels supplying various parts, so that hyperæmia is diminished and serous and sanguineous discharges arrested. In a series of papers read before the French Academy, in 1871, by Papillon, Mousnier, and Gubler, arsenic is treated as an agent endowed with many powers. Among others, besides those already noticed, it is claimed to be a reconstituent of the tissues, an arrester of disintegration, causing an accumulation of fat, calming febrile erethism and respiratory movements, and staying organic combustions. Under its agency abnormal temperature is diminished, waste of tissue lessened, and the amount of urea and urates in the urine notably affected.

After this sketch of the supposed general and local action of arsenic we may direct attention to some of its therapeutic uses.

The "tasteless ague-drop" of Fowler, first used in 1786, in the treatment of malarial affections, when the use of bark was not general in the same, is still considered by many the peer and by not a few as the superior of quinia. In the field of action as a prophylactic and antiperiodic it continues in some measure to hold its own. Against the paroxysmal type of disorders, with malaria as a cause, it is a potent weapon. It is true that the salts of bark more rapidly arrest the febrile paroxysms, and are more reliable when we have reason to expect their recurrence in the pernicious form. But it is well known that intermittents often return after quinia has been temporarily dispensed with, and sometimes even during its administration. The system seems to acquire a tolerance for the drug which after a time loses its remedial action. Indeed many affirm that while quinia may temporarily effect a delay of the febrile paroxysm, it tends to increase the susceptibility to the action of the morbid cause.

Arsenic is undoubtedly an antimalarial agent and a specific for diseases of the periodic type. Its remedial action may be slow, but it is none the less sure. Relapses after its use, together with abdominal engorgements and other sequelæ of intermittent fever, are said by many to be much less common than after quinia. Permanency of effect is its marked attribute. The contra-stimulation incident to a long use of quinine impairs the tone of the nervous system, and begets a condition of system favorable to the action of the exciting cause of the disease for which it was originally administered. On the other hand, arsenic cautiously used is a nerve-tonic, devoid of harm, and leaves no permanent bad effects. Its absence of taste and cheapness render it more desirable under many conditions and circumstances than quinia. Boudin, a French observer in Algeria, made trial of arsenic in four

thousand cases of malarial fever in its various forms. His report based thereon is that as a prophylactic and curative measure it is equally as efficacious as the salts of bark, and often more reliable as far as relapses and sequelæ are concerned. He states that he has cured cases which had resisted quinine. McLean, an English physician in the East Indies, states that in brow-ague, hemicrania, and neuralgias of malarial origin it is much to be preferred to quinine. Erasmus Wilson is of the opinion that arsenic administered in proper cases with caution surpasses any other known remedy in the management of malarial fevers.

To arsenic as an alterative, tonic, and curative agent in cutaneous diseases it is unnecessary to give more than passing notice. Its sphere of action here is well known. It is the remedy in all chronic skin-affections that are neither contagious, specific, nor cancerous. It is indicated in six out of seven cases, and all these are curable with it and incurable without it. Though beneficial in all such affections of the tegumentary system, it is particularly so in the scaly varieties, such as lepra, psoriasis, and pityriasis. In these latter cases, when not syphilitic, it is a true specific, and in others in which its good effects are often so apparent it is by nature of its primary tonic action whereby it corrects faulty assimilation upon which they depend, and by its secondary or stimulant influence which it exercises directly upon the skin.

It is a mistake to use arsenic in all diseases of the skin and under all circumstances. This error has occasioned much harm, and to it is to be attributed many of the failures and disappointments which are encountered. Administered at random, and without requisite preparatory treatment, many skin-affections are either rendered worse or not at all benefited. In the inflammatory stages of eczema, psoriasis, etc., the disorders are often aggravated by arsenic. Preliminary purgation, avoidance of irritating applications, cleanliness, attention to hygiene, etc., are prerequisites to success in an



arsenical course; and this applies to the use of arsenic not only in skin-diseases, but elsewhere. Used indiscriminately and without caution, in many diseases of the skin it is capable of injury, but properly applied in others it is admirable, and in one—viz., lepra—it is the only remedy known.

Frequently psoriasis, eczema, and other affections under the use of arsenic will seemingly be rendered worse. The redness, discharge, and irritation become aggravated for a time. These phenomena are often noticed, but are remarkable as being very often the forerunners of recovery.

As a reliable agent in the management of certain nervous affections arsenic holds a prominent place. It seems to have a special tendency to the nervous centers. It is the remedy *par excellence* for chorea. Begbie, in particular, states that he has used it for thirty years, and has never failed with it in the disease. Testimony from other sources is nearly as strong. The pathology of chorea has not been satisfactorily determined. By common consent, however, it is considered a paretic state of the spinal cord of a functional nature. The idea of an organic lesion is precluded by recovery being the rule. It is a characteristic of nerve-tissue that when weakened from any cause, or its normal functions otherwise interfered with, it expresses its recognition of such disturbing agencies by altered or perverted action in the parts it supplies. Hence the reflex convulsions in children from eccentric irritation, the *subsultus tendinum* in typhoid conditions, and the great mobility of the muscular system in chorea. The involuntary movements in chorea have been styled insanity of the muscles, the prayers of the nerves for healthy blood. While all who are anæmic do not become the subjects of chorea, the converse is generally true that choreics are anæmic. For this reason ferruginous preparations are often indicated, particularly when the anæmia is marked. Arsenic with or without iron often exhibits the happiest effects. With iron as an adjuvant and arsenic as

the remedy in chief, there is hardly a case of chorea which can be called incurable.

There is a marked relationship existing between chorea and rheumatism. Trousseau insists emphatically upon the invariable connection between the two. It will generally be found that choreics give evidences of some cardiac lesion present or past, and have had at some former period an attack of acute rheumatism. What the connection may be is difficult to determine. Anæmia most profound often follows as a sequel of rheumatic fever. Stokes long ago taught that in no disease is the blood more impoverished. This condition may give rise to that nervous irritability found in chorea. It may be that an anterior rheumatic fever leaves the nerve-centers in a state of hyperæsthesia, or it is possible that whatever changes in the spinal cord are incident to the choreic state may be but other modes of expression of the rheumatic diathesis. On any hypothesis the favorable action of arsenic may be explained. As a nervine tonic, increasing the vital power of the nerve-centers, it may render them better able to resist excitement, or, on the other hand, it may eliminate the rheumatic element.

It is claimed by some that the course and severity of epilepsy is favorably affected by arsenic. It must be confessed, however, that while this in some instances may be true, it is not comparable to some others as a therapeutic resource. Cases of epilepsy that are not benefited by the bromides and sulphate of atropia will hardly yield to arsenic.

In this connection it is well enough to remark that we are often compelled to pretermit the use of the bromides in epilepsy on account of the painful furuncular eruptions which often follow it. Echeverria asserts in his noble treatise on epilepsy that during their administration, if we combine with them small doses of arsenic, we will be enabled to prevent the occurrence of the eruption. We thus become able to continue the use of those agents whose action is most mani-

fest for good in epilepsy, and whose withdrawal on account of their disagreeable effects is often followed by a re-appearance of the convulsions.

In many neuralgias, and particularly those dependent upon malarial causes, Anstie and others claim that arsenic is a remedy whose action is magically certain and rapid. We are sure that this will be borne out by general experience. In many of those vague disorders—such as neuralgic headaches, lumbago, intercostal pain, and tenderness incident to the hysterical temperament in men and women—dependent upon impairment of centric tonicity and eccentric irritability of fiber, and due to an impoverished general condition, arsenic will rarely disappoint us. Trousseau directs attention to its remedial action in what he calls neuralgia with the herpetic diathesis. It is in those cases where the paroxysms of pain seem to precede, follow, or accompany an eruption of herpes.

In cardiac neuralgia, or angina pectoris, which is considered by Anstie as a true neuralgia and attributable to the same causes, that author is particularly partial to the use of arsenic. He considers it not only curative here, but as a marked prophylactic. In neuralgia of the viscera generally, which Anstie denominates visceralgia, he, together with Harles, Alexander, Albert, and Trousseau, favors arsenical medication.

Meryon lauds arsenic as an arrester of the onward march of progressive muscular atrophy and locomotor ataxia, and Trousseau claims that it produces excitation and increased power in the lower extremities. Reasoning thus, the latter observer suggests it in the treatment of paraplegia and loss of power over the rectum and bladder.

Hooping-cough and asthma, though usually treated of as diseases of the respiratory organs, really belong to the order *neuroses*. Though their ultimate effects may be exerted upon the structures of the lungs and air-passages, spasm is their prominent and pervading element. In hooping-cough the

spasmodic action is confined to the glottis and upper air-passages; in asthma it expends its force on the circular, unstriated fibers of the bronchi. In both there is abnormal excitation or otherwise perverted function of the vagus nerve, dependent upon some impression upon it at its central origin or peripheral distribution. The two affections therefore relate to the nervous system, and any therapeutics to be available therein must be directed principally to it. Such is the usual course pursued.

Many claim that the remedial agency of arsenic in hooping-cough is marked, and express themselves as satisfied with its action therein, as with the more generally used and highly-lauded sulphate of zinc and belladonna.

The trial of the powers of arsenic in alleviating spasmodic asthma is becoming much more general, and testimony is accumulating as to its happy results. Trousseau and Pidoux recommended to asthmatics the inhalations of the fumes of arsenite of soda. Ringer, in his late work on therapeutics, confidently does the same. Handfield Jones speaks of its internal use in asthma in terms of the warmest praise. Trousseau advocates it strenuously; Niemeyer makes favorable mention of it. In many of the systematic treatises, and scattered through the various recent medical journals, we notice not a little attention directed to arsenic as a remedy for asthma. In the *American Journal* for January, 1874, Dr. Paul contributes an article on this point. Paul states that after a long trial of the agent he is prepared to say that arsenic is the remedy of all others both for the mitigation and prophylaxis of asthmatic paroxysms. He thinks that it increases lung-power and diminishes neurotic reflex excitement, and has found it to relieve the attacks when all else failed; improvement becoming evident after its use in three or four days, or at the farthest a week. Paul also makes the strong statement that when called to see a patient in the midst of an asthmatic paroxysm he is confident of relieving

it by the hypodermic injection of five drops of Fowler's solution; and that he can accomplish this more rapidly and effectually than by the use of chloroform, opium, and other antispasmodics, by whatever avenue they may be introduced.

In hay-asthma also arsenic applied locally and used internally acts happily as a prophylactic, palliative, and curative agent. Morell Mackenzie, among others, advises it strongly.

Arsenic for its influence upon certain uterine diseases is indeed most valuable. As a capillary stimulant, nerve-tonic, alterative, and decongestive agent in diseased conditions of the mucous membranes in general, its effects in controlling certain derangements of the uterine system may be most opportunely called into play. In uncomplicated menorrhagia, or that not dependent upon polypus, cancer, or organic lesion, in which the condition is not a sthenic one, but the hyperæmia is passive and the organ is large, soft, and flaccid, arsenic rises to the height of a specific. To Aveling, Hunt, and Handfield Jones, of England, and Burns, of Maryland, are we mostly indebted for its use in this connection. In dysmenorrhea and menorrhagia not dependent upon physical obstruction arsenic is highly lauded by Sir James Y. Simpson and many others.

It is difficult to explain the beneficial effects said to follow the use of arsenic in some diseases of the digestive tract. Many of them doubtless may be traced to disturbance of the nervous system. By either its alterative action on the vasomotor system or as a corrector of vascular irregularities it may prove beneficial here.

Dr. Sidney Ringer insists that arsenic promotes warmth in the epigastrium, creates a sense of hunger, and stimulates digestion. He recommends its use in irritative dyspepsia where the tongue is furred and its papillæ red and prominent. He directs a drop or two of Fowler's solution after each meal in the various disturbances of the stomach and bowels in which it is applicable. Ringer considers it infallible as a palliative and curative resort in the dry retching and vomiting

of drunkards, where the ejected matters are sour and bitter; also in cancer, gastric ulcer, in chronic vomiting after meals without pain, or what is called simple regurgitation, and in crapulous diarrhea dependent upon dyspepsia, where there is great intestinal irritability, as evidenced by the excessive peristole and the appearance of undigested food in the motions. He also suggests the use of arsenic in the vomiting and collapse of malignant cholera.

Thorowgood uses arsenic and infusion of columbo with benefit in certain cases of dyspepsia where there is gastric pain with red tongue and projecting papillæ.

Leared extols the use of this agent highly in gastralgia and dyspepsia dependent upon mental causes, and where they occur as accompaniments of malarial disorders.

Dr. Allbut, of Leeds, remarks that of all the remedies for gastralgia arsenic is *king*, particularly where it occurs in a nervous temperament in connection with the gouty or nervous diathesis, or as an accompaniment of chronic cutaneous affections.

Trousseau uses arsenic freely and with advantage in what he denominates catarrhal diarrhea.

Dr. Austin Flint refers to its favorable action in diabetes mellitus.

The Gamgee brothers, in an article contributed to Reynolds's System of Medicine, mention it most favorably in their management of chronic glanders.

But it is in some of the respiratory diseases that the use of arsenic is attracting a very large share of attention at this time. Cahen, a French observer, believes that it is beneficial in all forms of dyspnœa, from whatever cause it may arise. Merrill, of New York, wrote to the same effect. Both contend that the action of arsenic upon the blood-vessels and bronchi is remarkable; that circulation is facilitated by it; congestion, hypertrophy, and hemorrhage relieved; and that it brings about increased capacity of the bronchial tubes for



the inspiration of air, inducing thereby a greater supply of oxygen to the tissues and freer decarbonization. Trousseau and many of the older authorities have suggested arsenical inhalations in the treatment of chronic pulmonary affections. In Greenhow's late work on bronchitis arsenic is an ingredient of all his prescriptions for the chronic form of that disorder. It is a favorite remedy with Walshe in the same affection.

In pulmonary phthisis particularly do we find it contesting the palm with cod-liver oil as a curative and analeptic medicine. Bennett's favorite weapon must look to its laurels. Merrill insists that twenty-five years ago he preached arsenical medication as the main reliance of those predisposed to consumption, and as the foremost prophylactic against those acute developments of pulmonary disease which often lead into fatal phthisis in strumous subjects.

Isnard, of Marseilles, in a series of contributions to late medical literature, sets forth his conclusions upon the influence of arsenical medication in phthisis which may be summed up as follows: that in pulmonary tuberculosis it diminishes febrile disturbance, nocturnal sweats, and general excitement; the digestive functions are improved, together with the diarrhea or its opposite, constipation; the cough is relieved, the secretion of the bronchi and pyogenic cavities lessened, and mucus in sputa substituted for pus. The improvement is general, the local lesions undergoing marked change for the better, cavities becoming cicatrized. Arsenic retards the evolution of tubercles, arrests evolution of new ones and softening of the old, rendering them abortive and latent, and not allowing them to pass beyond crudity. It promotes healthy respiration and relieves dyspnoea, acts beneficially on the pulmonary tissue, nerves, and muscles of respiration. By its local and general action it is at once curative and preventive, influences at once the capillary and different tissues, affecting both lungs and the whole economy. It does not

attack tubercle specifically as a parasiticide, but it acts on the elements and tissues which remain actually and relatively healthy.

Moutard Martin, of Paris, in his report to the French Academy, states that he has used arsenic in the treatment of phthisis in all its stages since 1861. In many instances he has effected complete cures thereby. In the main he agrees with Isnard in his estimate of its power. It has a marked action in slowly progressive phthisis, more so than in the rapid variety. In the latter the benefit derived from arsenic is not so positive. In all cases he has found that under this drug the general condition is more favorably modified than the local lesions. An arsenical course must be long and persevering, and it is better in the early than the later stages of consumption. Nonat, of La Charité, and Hérard, write to the same effect.

Dr. Austin Flint states that he has used arsenic in pulmonary consumption with manifest advantage. In my own limited observation arsenic has seemed to exert the happiest influence in the disease; and if at all beneficial in well-pronounced phthisis, the thought suggested itself, why may it not be equally so as a prophylactic against the developments of that morbid habit of body which is its inevitable offshoot and natural heritage? We allude to the strumous diathesis in its protean manifestations.

Arsenical medication is applicable particularly to chronic affections. Indeed it is not indicated and generally does harm in acute diseases, or in the acute stages of those that are chronic, where there is much febrile excitement and irritability. Chronicity as an element in diseased action is what we combat successfully by an arsenical course. Time should therefore be considered. Trousseau's maxim is applicable particularly here, that a chronic disease requires chronic treatment, and those who expect good results from arsenic in a week or two will certainly be disappointed. It often happens

that just as we are about to abandon it after a patient trial its good effects become apparent. Even in those disorders in which its action is so manifest it will sometimes fail unless we adopt certain precautions. Preliminary regulation of the diet and general hygiene, together with purgation, are often essential as introductory measures.

To those who aver that a long course of arsenic often gives rise to dropsical effusions and general cachexia, it may be replied that the *abuse* of a remedy is not its *use*. It may be remarked that there are few agents in the materia medica whose cautious use can be persisted in longer and whose deleterious effects are less enduring than arsenic. To administer it on an empty stomach, in constantly-increasing doses, without regard to attendant conditions, and push its use in the face of its pathogenic effects, is irrational, and will surely be followed by untoward results. The rule is to commence with small doses and gradually increase, leaving it off from time to time as its effects may seem to indicate. Fowler's solution is the form in which we generally administer arsenic. The French, as a rule, prefer solid arsenious acid in pill. It might be advisable in certain instances to push the remedy in large doses and sustain its effects by prolonging its administration. This is the custom of Devergie and some others, who remark that it is better to impress the system rapidly in order to insure fully its remedial effects; but the majority incline to the view that the slow alterative action is what is desired. Hunt states that it is a fatal mistake to use it in doses large enough to fully and rapidly impress the system. Commencing with two or three drops of Fowler's solution after each meal, increasing to five drops and sometimes to ten, is the customary mode. We are much mistaken if many patients will bear for a very long period even five drops of the arsenical solution without being inconvenienced by it. Pretermission of it for a time often becomes necessary. Five drops of Fowler's solution represent one twenty-fourth of a

grain of solid arsenic. Taken three times a day, one eighth of a grain is consumed; a grain a week, or four grains a month; no very inconsiderable amount when we come to think of it.

There are not a few who insist that the hypodermic use of this agent is better than by the ordinary method, inasmuch as they claim that less of it is needed for a given effect, that it is more certain of absorption, that it produces no disturbance of the digestive organs, a smaller amount is required, and that treatment is shorter and more effectual.

LOUISVILLE.

## Reviews.

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**Transactions of the Twenty-third Anniversary Meeting  
of the Illinois State Medical Society, held at Bloom-  
ington, May 20 and 21, 1873.**

This is a handsome volume of somewhat more than two hundred and fifty pages, which are variously occupied with speeches, discussions, reports, etc. The speeches are first in order, and therefore a moment's reference to them. Bloomington, the place of this meeting whose proceedings are before us, must be rich in speech-makers; certainly this occasion was rich in speeches. First the citizens had a spokesman, Dr. Worrell, who delivered "a welcome address," concluding with Bryant's familiar lines about the "innumerable caravan," "quarry slave," etc., that have been used so often that really they have got too thin for any thing but the lightest rhetoric. To this Professor Anderson responded. Then came upon the stage Ira J. Bloomfield, Esq.—not a *dies iræ*, but doubtless a *hora iræ*, as would befit his position—who, in behalf of the "common council and municipal authorities of the city of Bloomington," welcomes the learned Illinois doctors again. Dr. Pierce, of Cook County, responds and praises Bloomington right handsomely, as if he and the other orators were members of a mutual admiration society. Then comes Mr. J. A. Jackman—we are sure we are writing the name correctly, *Jack-man*—who represents the board of education, and gives the great doctors another welcome. Mr. Jackman ambles along in respectable prose for a few sentences, and then breaks forth into some very stupid rhythmic jingle that is not worth

the two pages of paper upon which it is printed. Nevertheless, let us repeat, the author's name was simply Jackman. Dr. McArthur replies, and fights over the late war. Then comes another "welcome"—really these doctors were so very much welcomed we wonder they ever got away from Bloomington—this welcome being by the Hon. Hamilton Spencer in behalf of the bar of McLean County. We supposed the welcoming was done, subject and orators quite exhausted; but looking further on in the volume we find that the second day the State Normal School was visited, when President Edwards assailed the doctors with some more welcome rhetoric.

Still another speech we must refer to before coming to the real professional work of the Society. Dr. George T. Allen discourses upon *the progress of civilization*, appending to his lecture a note acknowledging that he has placed himself under "great obligations to Draper, the late Dr. Buckle," Adam Smith, and Mill. Prof. Draper will feel honored, and thus the great obligations to him will be canceled; and as for Buckle, Mill, and Smith, probably they will not take any notice of the address, or take any steps even in the court of Rhadamanthus to enforce the obligations. But really the lecture, which was doubtless interesting to its auditors, was almost as unsuitable for the occasion and for publication in the transactions of a medical society as a discourse upon the manufacture of Elgin watches, or the character of Saturn's rings, or the uses of any other sort of rings.

Dr. J. L. White, of Bloomington, made the *report on surgery*. Dr. White believes "*conservative surgery*" is to be avoided in railway injuries; speaks of the generally-recognized value by the profession of Illinois of drainage tubes to insure the free and entire discharge of pus wherever collected; advocates Manzoni's operation for stone—*urethrotomy*—an operation performed successfully thirty times by Dr. Wood, of Kansas City; five successful cases also by Dr. Hill, of Bloomington.



He reports a case of dislocation of the ilium—recovery; condemns the use of stimulants in shock from accident; believes carbolic acid the most indispensable—unless sulphuric ether—article to the surgeons, and chloroform an unsafe agent even in the most careful hands. This report elicited a very interesting discussion, having among its participants Drs. Andrews, Prince, and McArthur.

Dr. J. B. Hamilton made a report on the *treatment of fractures in Illinois*. After presenting various reports of fractures treated, Dr. H. remarks that "immovable dressings, whatever may be their merits or demerits, are evidently not much in use in Illinois; and the majority of the profession in the state do not adhere to the doctrine of waiting for the primary swelling to abate before applying a permanent dressing." . . . "The variety of dressings which have been reported for the same fractures, and the almost uniform success attending their efforts, would seem to indicate that in skilled hands almost any kind of an apparatus that fulfills a majority of the indications to be met will meet with reasonable success."

Dr. Holmes presented a report on *intraocular tumors*; Dr. Hotz, on *strychnia in amaurosis*, his conclusions being as follows: "1. Strychnia in small doses can produce a marked stimulation of the optic nerves; 2. Its hypodermic use is the best; 3. The dose may be gradually increased to one twelfth of a grain without injury to the system; 4. If the first injections do no good, it is not worth while to continue its use; 5. It is useful in functional and in traumatic amblyopia and in tobacco amaurosis; 6. No use in amblyopia with morbid changes in the choroid and retina, nor in far-advanced atrophy of the optic nerves; 7. In all cases of atrophy of the optic nerve strychnia is a valuable remedy, because by a few injections we can ascertain whether a useful amount of sight can be recovered, or whether the atrophic destruction of the nerve has advanced beyond aid.

Dr. Andrew McFarland is the author of a very able report

on *medical jurisprudence*. The two topics which this report chiefly discusses are *questions of professional practice* and *questions of mental state*. Dr. McFarland, in concluding, very sensibly remarks that "it is to be deplored that the science of the mind, as well as its diseases, seems of late to receive less than formerly the attention of medical men. They are too much regarded as a specialty and outside the main track of the profession. Those who neglect them do not seem aware of the aid they lend in the investigation of mere bodily disease. How little account is made of the patient's mental state when listening to his narrative of his individual sensations and acts! How often his false sensations—his absolute delusions even—go in without a question to shape the most important opinions! This field is too broad and fertile not to merit attention on some future occasion. But in the department of jurisprudence every physician owes it to himself to be informed on the subject so far as to be the respected instructor of juries, and not the helpless victim of the arts of another profession; and we dismiss the subject with the remark that many a reputation, secure under the not-to-be-measured merits of the sick-room, receives an almost incurable wound under what the public will regard the crucial test of the witness-stand."

Dr. J. H. Hollister presented the *report on drugs and medicines*. We shall present an extract, not because it has any obvious connection with drugs and medicines, but as a specimen of the sublime altitude to which a doctor may rise on rhetorical wings when we were expecting a dry discussion of powders, or at least nothing better than sugar-coated pills. "Time was when the stars seemed but glittering gem-points, spangles adorning the curtain of night; now they are resolved into as many worlds; and the music of these spheres in their perpetual rounds is one of the grand anthems of the ages."

A report on *galvano-therapeutics*, by Dr. David Prince, is the most elaborate paper in the volume. Dr. P. has been

a diligent and most successful worker in this department, as well as in others, and really the results of his observation are so valuable that we wish his entire report could have a much wider circulation.

Dr. Hawley reports on *the assistance necessary and justifiable in difficult and protracted labors*. The subject especially discussed in this brief report is the value of *external pressure*. Dr. H. believes such pressure "will be found applicable in a very considerable number of cases in which a moderate addition to the expulsive power of the mother is sufficient to determine the birth, which will not take place without some exterior aid." Dr. H. states that he believes "writers on obstetrics have not deemed such efforts to supplement the expulsive force of the mother as worthy of discussion," etc. He also speaks of "adding fifty pounds" to the maternal forces. If Dr. Hawley will turn to pp. 13 and 14 of Barnes's *Obstetric Operations*, he will find that the question has been fully presented; and he will find too that the accoucheur will not ordinarily be required to exercise any thing like the amount of force he suggests. So too in the *Lancet* (Oct. 1, 1870, London ed.) he will find external pressure advocated by Playfair. Finally, in the sixth volume of the *American Practitioner*, 1872, page 109, he will find an extract from a monograph on *Uterine Expression*, Paris, 1872, by Dr. Suchard, in which the practice which he urges in 1873 as a novelty is fully set forth.

Dr. Worrell has a paper on *the chief causes of phthisis in New England*; Dr. N. S. Davis on *chronic cerebro-spinal meningitis*; Dr. Earle on *the physiology of the nervous system*; Dr. G. Wheeler Jones on *cerebro-spinal meningitis*; and Dr. Samuel J. Jones on *otology*. We would like to refer to some points in the brief but of course excellent paper of Dr. Davis, as well as some in the longer but still very interesting one of Dr. G. W. Jones, but time will not permit any further notice of this volume.

T. P.

**Clinical Notes on the Electric Cautery in Uterine Surgery.** By J. BYRNE, M. D., M. R. C. S. E., etc. New York: Wm. Wood & Co.

This is mainly a revision of a paper by Dr. Byrne in the New York Medical Record, and issued in compliance with the wishes of many prominent members in the profession.

Dr. Byrne's little volume is excellent, and will be useful not only in directing the attention of the profession to the value of the electro-cautery in uterine surgery, but also in teaching them how it is to be used. In the last number of this journal there were given some practical rules laid down by Dr. B. in his book; rules which are of especial value as coming from one who probably has had a larger experience than any one else in this department and in this mode of surgical operations.

T. P.

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**A Practical Treatise on the Diseases of Children.** By J. FORSYTH MEIGS, M. D., and WILLIAM PEPPER, M. D. Fifth edition, revised and enlarged. Philadelphia: Lindsay & Blakiston. 1874.

The merits of this work are too well known to need a word from us. A fifth edition in 1874, only a few years after the first was issued, is sufficient evidence of the verdict of the American profession. "Meigs and Pepper," we fully believe, stands at the head of all works in the English language on diseases of children. We can not enter into any analysis of the work, nor is it necessary. We only add that in this edition several new articles appear, and several of the old ones have been re-written, so that the work is fully up with the pathology and therapeutics of the present day.

T. P.

## **Clinic of the Month.**

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TREATMENT OF GRANULAR OPTHALMIA. — Mr. Swanzy, Ophthalmic Surgeon to the Adelaide Hospital, Dublin, says (*Irish Hospital Gazette*) in a recent lecture on this subject:

"The first and most important thing is to provide abundance of fresh air, both within doors and without, for your patients. You should never permit them to remain moping in the house, as they are apt to do, but strictly prescribe several hours' open-air exercise daily for them. I am convinced that more may be effected in many conjunctival diseases by fresh air alone than by any other treatment without it. It acts, I think, directly and locally on the conjunctiva, and not in any round-about way through the constitution. I have already mentioned that you should excite vascular reaction when it is insufficient for the absorption of the granulations, and restrain it when excessive. The means for exciting vascular reaction in the conjunctiva are various. Hippocrates practiced four eye-operations, one of them being the 'rubbing-off of granulations.' He did not really rub them off, but excited vascularization mechanically. I have heard that the same proceeding is now again practiced at Athens by Dr. Anagnostakis, the implement employed being a bit of rough cloth. Warm fomentations will also excite hyperæmia. However, the most usual method is by aid of chemical substances of one kind or another applied directly on the mucous membrane; and a constant bone of contention it is which application is the most effective for a cure. There are some who use solid sulphate of copper to the exclusion of every thing else, while others banish it quite from their practice. I know

some who use nothing but a weak solution of acetate of lead, and again others who discard every thing but a solution of nitrate of silver. Very often the result depends upon the manner in which the substances are applied as much as in the kind of substance. As a rule, when I want to excite hyperæmia I use the solid sulphate of copper; when I wish to check excessive blennorrhœa I apply a ten-grain solution of nitrate of silver to the conjunctiva with a camel's-hair pencil, and neutralize it then with a solution of common salt, washing this off with plain water. The effect of the application can be modified by the length of time (a few moments more or less) which elapses between the nitrate of silver and the salt-water. When the blennorrhœa seems to be only slightly in excess, the liq. plumb. subacet. dil. of the pharmacopœia (without spirit) is an admirable thing. It also should be washed off with plain water, and its use in this way is not contra-indicated by the presence of ulcers on the cornea. It is most important in using any local application that the upper lid be well everted, in order that you may reach that part of the membrane where it is reflected from the lid on to the globe; for a neglect of this part might render your treatment abortive.

"After you have been treating a case for a lengthened time regularly you should not suddenly stop when you have reached a certain point, but you should leave off gradually, with increasing periods between each application; otherwise you are very apt to have a recurrence. I never prescribe tonics or other internal remedies in the treatment of granular ophthalmia, unless when they are indicated by other symptoms than those simply of the eye-disease.

"You observe that the object of using caustics in this disease is not for the purpose of destroying the granulations by their direct action. They are not, in fact, used as caustics, but either as excitants of vascular reaction or as astringents. Your object is to restore the conjunctiva to its normal con-



dition; but if you cauterize it you must produce cicatrization, the very thing you wish to avoid. For the same reason you should not snip off the protruding granulations, nor should you scarify the conjunctiva.

"When you get a fresh case of acute granular ophthalmia (military or Egyptian ophthalmia) you should not at first use any topical application. Use iced compresses to the lids externally, leeching at the external canthus, and purging. If the attack does not go back of itself, the membrane will bear local measures later on much better than at first.

"If certain complications are present, you will find it difficult to make way with the treatment until you have removed them. A very common one, and one liable to be overlooked, is an obstruction in the nasal duct. If the tears do not flow off readily, they lodge in the conjunctival sac and keep up a constant irritation, which is unfavorable for the cure. There are some persons whose lids are much more tightly applied to the globe than others, and in them granular ophthalmia is apt to be very obstinate. You must in such cases endeavor, by means of the operation for blepharophimosis, to relieve this tension of the lids. When pannus has existed for a lengthened time it often induces a chronic serous iritis, recognizable by the increased depth of the anterior chamber and by the inaction of the pupil when atropine has been dropped in. For many reasons this is always a dangerous condition of the eye, and you may be sure that unless you treat it you will not remove the pannus. Atropine, puncture of the anterior chamber, or an iridectomy are to be employed."

ON THE ANTIPYRETIC ACTION OF QUININE.—In a very clever paper on this subject in the *Practitioner* by Dr. Clifford Allbutt he says:

"I found quinine to be a very powerful antipyretic in septic fevers. In that kind of remittent pyrexia which is seen in pyæmia, in septic absorption, in erysipelalous peritonitis, and

the like, I have generally found that quinine in daily quantities of twenty to sixty grains will greatly reduce the oscillations. I have very often found indeed that by its means the rises may be wholly prevented, and the patient made apparently fever-free. Again, in the prolonged hectic of pulmonary disease and like affections, I have found it easy to moderate the daily movements, and perhaps to prevent them; but in such long-continuing cases it is not desirable to add chronic cinchonism to the other symptoms, and five or ten grains is generally the limit of the daily quantity. Little indeed could be gained by wholly reducing the fever. To reduce it in great part suffices to prevent rapid wasting, to prevent chills and sweats, and to restore appetite; but the local disease itself is not removed. Indirectly, of course, we relieve it, insomuch as the fever and the primary disease act and react upon each other, and the primary failure has more chance of repair if the fever be moderated. But to moderate it seems better than to repress it with a heavy hand, and I have many charts, extending over weeks of time, in my possession which show the effect of quinine in bringing the daily oscillations within much narrower parallels, and in thus giving the patient more chance of recovery. Many a case of dangerous pneumonia of the apex and the like has thus ended favorably which looked bad enough until the above means were adopted. Quinine also in doses appropriate to the occasion—and this the thermometer alone can decide—is to be given whenever septic incidents are seen in the course of specific fevers or following them; and if the absorption be slight or temporary, the immediate and repeated use of quinine is invaluable.

“Turning now from this free estimate of the value of quinine in septic and hectic states to its effects in specific febrile periods, I speak with less confidence. Sometimes it fails even in very heavy doses to depress the curve at all; sometimes it depresses the curve for a time, but the depression is followed by a bound

upward which the same means can not control. Such results we generally see in the ascending section of the curve. I have not had much reason to congratulate myself on the use of heavy doses of quinine in depressing the elevation of the first four days of typhus or pneumonia, or in the hyperpyrexia of rheumatic fever. Often I have thought my interference to have been positively harmful, but of this it is difficult to be sure. Therefore when we have to meet immediate danger from a rapid rise I put no trust in quinine, but resort at once to cold baths, bags of ice, and the like. If, however, a high temperature is doing harm at the latter part of a period, quinine will often act like a charm. If, for example, toward the end of the third week of typhoid, a temperature of  $104.5^{\circ}$  or  $105^{\circ}$  is likely to be too much for the frame already too far consumed to resist it as it would once have done, then twenty grains of quinine is often very valuable; and such doses, repeated as may be required, may determine the close of the period and release the sufferer. In the second week we get no such success as this. Again, after or during defervescence, we often meet with impulsive elevations of the curve, apparently not due to any septic absorption, but which betray the enfeebled tension of the regulating power of the body. Against these quinine is most useful, and often cuts them short at once. Their return may also be prevented by the prescription of five grains of quinine every morning for a few days.

"It is not easy to frame any general explanation of these facts, but I will attempt it in a provisional way. First of all, quinine is perfectly harmless, and is well borne in fever. I have often given as much as three and four drachms in twenty-four hours, and often in cases where it certainly has exercised its antipyretic powers it has not produced even cinchonism.

"Secondly, its action is more and more useful as the febrile movement approaches the remittent and intermittent forms. In 'blood-poisoning,' when the temperatures vary

between  $101^{\circ}$ , say, and  $103.5^{\circ}$ , it is useful; and if the oscillations be between  $99^{\circ}$  and  $104^{\circ}$ , it is invaluable so far as the fever is concerned. But the victory has too often seemed to me to be a barren one. If the 'blood-poisoning' be comparatively small, the disease may be or seem to be cut short or reduced; but if the poisoning be more intense, and its sources can not be controlled—as in puerperal cases, for instance—I have been sadly disappointed to find, although the temperatures may have been kept down even to the normal, that death or great local mischief has scarcely been warded off. I lately saw a case with Mr. Carter, of Leeds, in which a lady died after some three weeks of septic fever following small-pox, although we were easily able to keep the daily curves within or almost within the parallels of health. Her life was probably prolonged, but not saved. She became weaker, nervous tremors set in as usual, the breathing became more rapid, and she died of exhaustion in spite of unlimited food and alcohol. I saw a case very like it about a year ago with Mr. W. Hall, of Leeds. We kept the temperature down as we pleased, but we could not flatter ourselves that the patient's state was materially lightened thereby. After a long fight her life was spared, but an enormous abscess or abscesses formed in the right shoulder and arm. This was a puerperal case. So that I can not regard quinine as an indirect antipyretic by virtue of any power as a direct antiseptic, as I was once tempted to suppose. On the contrary, it checks the fever, while a fatal issue nevertheless seems to prove that the septic mischief may and often does continue unmoderated. It is almost unnecessary to state how far my experience is borne out by the well-known effects of quinine in intermittent fever properly so called. Once more: is quinine useful in moderating the average intensity of continued fevers having a definite course, such as typhus or typhoid? To use my former figure of speech, can we by quinine flatten the trajectory of such a disturbance; and if so, what do we

gain by it? We might fairly hope to limit the injurious consequences of a prolonged pyrexia, such, for example, as the combustion of the heart. My own experience of the continued use of large doses of quinine in typhoid is full of contradictions. On the whole I have not a very cheerful view of our capabilities in this respect; and as a matter of practice I have found myself neglecting to use quinine at all during the stages of ascent and of culmination, and reserving the drug for the time of flickering, when the remittent oscillations of impending lysis enable me to act with certainty if required."

MERCURY IN SYPHILIS.—The following are Mr. Jonathan Hutchinson's *conclusions*, as given in the London Lancet:

That mercury is probably a true vital antidote against the syphilitic virus, and that it is capable of bringing about a real cure.

That in practice a good many cases are really cured by mercury; the cure being proved by the restoration to good health, and in some cases by renewed susceptibility to contagion.

That the probability of cure depends upon the stage of development attained by the disease when the remedy is resorted to, and upon the perseverance with which it is used.

That in order to secure the antidotal efficacy of mercury against syphilis, it is desirable to introduce a considerable quantity into the system and to protract its use over a very long time.

That ptyalism and other evidences of the physiological action, so far from being beneficial, are, if possible, to be carefully avoided, since they prevent the sufficiently prolonged use of the remedy.

That in cases in which the patient shows an idiosyncrasy peculiarly susceptible to mercury, the indication is to reduce the dose rather than to omit the drug.

That it is impossible to begin the administration of mercury too soon, and that it should be resorted to without loss of time in all cases in which a chancre shows a tendency to indurate.

That many cases of indurated chancre treated early by mercury never show any of the characteristic symptoms of the secondary stage.

That in other cases of mercurial cure of the chancres in which yet secondary symptoms do occur, they are usually milder than if allowed to develop without specific treatment.

That when mercury does not wholly abrogate the secondary stage it exhibits a remarkable power in delaying it.

That delayed outbreaks of secondary syphilis are to be regarded rather as a proof that the administration has not been sufficiently persevering than that the remedy was not efficient.

That it is probable that the risk of tertiary symptoms is in ratio with the severity and prolonged duration of the secondary stage.

That there are some grounds for believing that the tertiary symptoms of syphilis are both less frequent and less severe in those who have been efficiently treated by mercury than in others.

That mercury cautiously given does not in a great majority of instances do any injury to the general health, and that its local inconveniences may usually be prevented.

That the doctrine of the real antidotal character of mercury in respect to syphilis ought to lead to much more prolonged administration of it, with the hope of destroying utterly all lingering germs of the malady.

That most collected statistics as to the duration of treatment and freedom from relapse are misleading and worse than useless, because usually the treatment was far too short to be effectual.

That it has not yet been proved that there are any special



forms of syphilitic diseases in which mercury ought to be avoided, although, as a general rule, it is acknowledged that it must be used with more caution in all forms which are attended by ulceration than in others.

That iodide of potassium possesses little or no efficacy against either the primary or secondary forms of syphilis.

That the efficacy of mercury is often most signally proved in cases which have utterly resisted the action of iodide of potassium.

That it does not matter whether mercury is given by the mouth, by inunction, or by the vapor-bath, provided that whichever method be selected care be taken to avoid salivation, purging, etc.

That the doses usually resorted to for internal administration are for the most part too large, and thus often necessitate a premature discontinuance of the remedy.

That if one method of administration does not proceed satisfactorily, another should be tried, and that in no case of difficulty should the vapor-bath be forgotten.

**TETANUS NEONATORUM.**—In the *Jahrbuch für Kinderheilkunde* (Dec., 1873) is an article on the treatment of tetanus neonatorum with chloral hydrate by Dr. A. v. Huttenbrenner, of Vienna. Three of these cases were treated by chloral hydrate in the clinic of Prof. Widerhofer, and two recovered. The medicine was administered in the following way: one or two grains, alone or mixed with a little milk and sugar, were administered, dissolved in breast-milk, through the nose, as the mouth was firmly closed. The administration was generally followed immediately by a paroxysm, which ceased when the action of the chloral began. When the child fell asleep it was carefully watched, so as to repeat the dose on the approach of the next paroxysm. When the effect of a one-grain dose did not last sufficiently long it was increased to two, sometimes to three grains, so as to obtain an action

lasting several hours, as a good result is only obtained where the child is held in continuous narcosis. The child's nourishment must not be neglected, but the breast-milk must be given through the nose. Where such patients suffer with colic or meteorismus warm poultices are applied to the abdomen and enemata are administered; internally, paullinia and tinctura krameriae are given. Injurious effects from chloral hydrate are never observed when certain precautions are used. When there is an odor of chloroform in the breath this is a sign of deep narcotism, and the medicine should be left off for a while, as sometimes chloral hydrate has an accumulative action. The three cases are reported in full, with records of the autopsy of the fatal case. The author draws the following conclusions: 1. Tetanus is not an absolutely fatal disease. 2. The same can run through its course with or without fever. Those cases running a rapid course, with high fever, are cases where the tetanic symptoms are merely those of a general poisoning of the blood, while those cases without fever are to be regarded as of reflex origin, due to some peripheral irritation. 3. The cases without fever have a more favorable prognosis, although where the fever is high the prognosis is not absolutely a fatal one, as is shown by Dr. Kirchstetter's case, reported in the *Fahrbuch* (vii *Fahrgang*). 4. Chloral hydrate is by no means a specific, but is a remedy preferable to all others: (a) Because it is a pure hypnotic; (b) Because it has no unpleasant after-effects, as morphia has, causing hyperæmia of the brain; (c) Because it is easily administered, and an accumulative action is very rare.

It has the advantage over chloroform of being more easily held under control. The child is put into a quiet sleep, and the consequences of long-continued muscular contractions, particularly of the diaphragm, are made less injurious. As tetanus lasts from fourteen days to three weeks, it is only necessary to enable the child to hold out this length of time or recovery to take place. (Boston Med. and Surg. Jour.)

NEW PROCESS FOR TAR-WATER.—L. Pommier prepares a concentrated tar-water by macerating in a covered vessel for eight days a mixture consisting of ten parts each of Norwegian tar and ammonia-water and of one hundred parts of water. The mixture is then boiled to expel the excess of ammonia, then cooled and filtered. Thus prepared it has a mild alkaline reaction to litmus, and may be diluted as required. (*American Journal of Pharmacy.*)

CROTON-CHLORAL HYDRAT.—Dr. Baker writes in the *British Medical Journal*:

"The profession and the public are chiefly indebted to Dr. Oscar Liebreich for the introduction of chloral hydrate; and this obligation is further increased by the addition of croton-chloral hydrat, which will doubtless prove an equally valuable therapeutic agent. It is of the greatest service in cases of nerve-pain. Every sufferer from neuralgia is anxious to obtain speedy relief from pain. This may be obtained by taking croton-chloral hydrat, and then the antecedent causes of the neuralgia may afterward be inquired into and treated accordingly. The following cases are interesting, as showing the immediate relief from pain that this drug affords.

"A suffered from facial neuralgia of a most severe character. It affected her hearing and eyesight; she could not rest or take food. She took one grain of croton-chloral hydrat every hour. In three hours she was considerably better. After taking three more doses she was entirely free from pain.

"B suffered much from facial neuralgia dependent on decayed teeth, and had not been able to take food or sleep for three days. She was ordered croton-chloral hydrat in grain-doses every hour, and obtained great relief after two doses. Six doses removed the pain completely. She slept that night.

"C. This patient suffered from concussion of the spine

caused by a railway accident some years ago. She has had every variety of treatment for the pain she suffers in the spine and the nerves proceeding therefrom. She took twenty grains of potassium bromide and one grain of croton-chloral hydrat three times a day, with marked relief and no bad symptoms.

"E is a young dyspeptic and neuralgic patient, and suffers greatly from dysmenorrhœa. She took two grain-doses when the paroxysms of pain came on with marked relief.

"F has been under treatment for various neuralgiæ for some years. She has had at one time or another almost every external and internal therapeutic agent in the pharmacopœia; strychnia, iron, quinia, ammonium chloride, aconite, belladonna, iodine, bromine, blisters, hypodermic injections, galvanism, together with baths and other hygienic appliances, including change of air. In this case two grain-doses of croton-chloral hydrat every hour afforded more speedy relief from pain than any of the above remedies. After taking eight grains she was almost free from pain.

"In thirteen patients who have taken croton-chloral hydrat not a single bad symptom has been observed. In grain-doses it relieves pain quickly, causes natural sleep, no subsequent headache or furred tongue. In several cases it acted as a gentle laxative."

## Notes and Queries.

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*Editors American Practitioner :*

I beg the favor of a few words in explanation as to the subject of a review of my humble article upon "expert testimony" as appearing in the February number of your journal. The writer of the review is evidently a pure-minded gentleman, who does not stake his reputation as a critic upon hypercriticism, but wrote in a spirit of honesty. Such reviews are commendable, and can not fail to do good. In speaking of the Miss Steinecke poisoning case, the reviewer thinks us in error in supposing that the "incompetent testimony" was alone chemical. Upon an examination of our article he will find that we were not discussing *all* the points in that case, but only bringing up certain ones to illustrate our position, which was that in any given case, with the *best* chemical examination, there might be other testimony so absurd or erroneous as to negative any chemical evidence, and not simply to assert there was no fault in the chemical evidence of the case cited. We still think that our position, as explained, was correct.

As to the very candid remarks of the reviewer about the tabulated steps of Profs. Reese's and McCulloch's analyses, as quoted in our article, we simply say that we waive the point as to whether it was *hot* or *cold* hydrochloric acid used by the latter in dissolving his precipitate, although from our understanding of the report we can come to no other conclusion than that it was *cold*; for, as the reviewer himself quotes the testimony: "I do n't know that it was *hot* or *cold*; it was *strong* acid;" but we give the point and then the

similarity would be complete. But what about the *vital* difference found in the action of tartaric acid on *one* precipitate and hydrochloric on the *other* but similar one in the second analysis? If tartaric acid *did* dissolve it, then this step looked toward antimony; if it *did not* dissolve the second precipitate, but hydrochloric acid had to be resorted to, then this was proof positive that the second was not antimony. This is the important and crucial test in the process, and the reviewer has not attempted to reconcile the two processes or explain the subject in any way. Indeed they are not susceptible of reconciliation. The processes were *not* in any degree similar, and therefore can not be justly compared. Now this was the only step in the analysis we dwelt upon. The additional ones noticed by the reviewer are well worthy of consideration in any given case, but they do not bear upon the point discussed in the least.

As to the *gist* of the whole of Prof. Reese's remarks being the impropriety of relying *exclusively* upon the sulphureted-hydrogen test for antimony, we differ in our views from the writer. Dr. Reese expressly attempts to prove the fallacy of this one step in Prof. Aikin's analysis, and it is to this we directed our attention. In this he certainly failed. That this should be *all* that is done in any suspected case we certainly do not believe, and expressly stated in our article that "this is not the same as saying that antimony was present in the specimen he analyzed; but it is saying that, taking his statement as true and other things being equal, we know of nothing that would give the results in their entirety *but* antimony;" and so we still assert. The case may have been rightly decided, but the attempt of Dr. Reese to institute a just comparison between the steps of the two analyses failed.

INDIANAPOLIS, IND., March, 1874. THAD. M. STEVENS, M. D.

[In connection with the above, and in the absence of the writer of the review, we beg to offer one or two remarks.



If Dr. Stevens only meant to "illustrate" his "position, which was that in any given case, with the *best* chemical examination, there might be other testimony so absurd or erroneous as to negative any chemical evidence," he was most unfortunate in his selection of the *Schæppe case* for his illustration; inasmuch as it is universally conceded that the "chemical examination" in this case was not only *not* "the best," but, on the contrary, was materially defective, as was pointed out in the review in our February number.

Secondly, in relation to Dr. Stevens's interrogatories about "the *vital* difference found in the action of tartaric acid" on the two precipitates (the one alleged to be antimonial and the other composed of complex organic substances exclusively), we find on turning to his tabulated paper that he says "the only point of resemblance to the proper action of antimony under the same circumstances was the cloud produced when the first precipitate dissolved in hydrochloric acid was cast into water;" whereas, in point of fact, the only *distinction* between the two cases (as stated in the review) "is the single circumstance that the white cloud is soluble in tartaric acid if antimony is present." So far from there being but one single "point of resemblance," there really is but *one single point of divergence* out of the whole number of reactions following the employment of the sulphureted-hydrogen test. If we remember the report of the Wharton trial correctly, the points of resemblance pointed out by Prof. Reese and others were: (1) the reddish precipitate by sulphureted hydrogen, (2) the solution of this precipitate in *boiling* hydrochloric acid, (3) the production of a white cloud or precipitate on throwing the last-mentioned solution into water, and (4) the imparting to this last precipitate a reddish-yellow color on touching it with sulphide of ammonium. The *only* point of divergence was a difference in the action of tartaric acid, as before mentioned. Now, with the above facts before us, we think that Dr. Stevens is hardly warranted in asserting that "the

processes were not in any degree similar, and therefore can not be justly compared." Neither do we think him quite fair in saying "this is the *only* step in the analysis we dwelt upon," when he had taken the trouble, as he informs us in his first paper, to "tabulate" the results of both experiments, and had arrived at the *wrong* inference that there was one "only point of resemblance" between the two.

We are not much given to chemical researches, but on a careful reference to the published trial we feel fully warranted in arriving at the above conclusions; and if the discussion of the subject in our pages shall have the effect of producing a greater amount of care and caution in those to whom the responsible duty of medico-legal examinations is intrusted, our purpose will be fully answered.]

NOTHING NEW UNDER THE SUN.—It is with no desire to detach a single leaf from the well-earned laurels of the Kiel professor for whom the honor of instituting "bloodless surgery" is claimed—especially since the publication of the noble sentiments expressed in his letter to Mr. McCormac—that these lines are penned. So far from disputing his right to priority, we would fully join in the expressions of McCormac: "No prior method even achieved the result; and such result, obtained as it has been in Esmarch's case, establishes his claim to priority of the best sort—a practical success." But as many of the records of early attempts at instituting similar procedures have been revived, it may not be out of place to call attention to the following paragraph extracted from the *Western Journal of Medicine and Surgery*, edited by Dr. L. P. Yandell, of July, 1845:

"BLOODLESS AMPUTATIONS.—Our friend, Dr. Mosby, proposes to save the subjects of amputation from loss of blood, occasionally a very disastrous circumstance in exhausted individuals, by the following method, which he lately communicated to us and requested us to submit to the profession. First, he would apply a roller-

bandage to the limb, so as to force the blood as much as possible out of it, and then by my means of a tourniquet cut off the ingress of blood by the arteries, slackening the instrument after the amputation sufficiently to find the vessels that might bleed. . . . ¶.”

It matters little whether Dr. Mosby preceded or followed Clover, Stromeyer, Langenbeck, and others, the “groove” in which the surgical mind has run is sufficiently demonstrated, and a portion of the credit is claimed for Kentucky surgery.

E. M'C.

TASTELESS TINCTURE OF THE CHLORIDE OF IRON.—We are indebted to Dr. Vincent Davis, pharmacist, of this city, for the following formula for the preparation of the tinct. ferri chlorid. (new):

R. Citric acid, . . . . .	℥ j;
Carbonate potassium, . . . .	q. s.;
Distilled water, . . . . .	℥ j;
Sol. chloride of iron (offic.), .	℥ j;
Dilute alcohol, . . . . .	q. s.;
White sugar, . . . . .	℥ ss.

Dissolve the citric acid in the water, apply heat sufficient to bring to the boiling-point, then remove from fire and add carbonate potassium until it ceases to effervesce. You now have a beautiful green solution, to which add dilute alcohol sufficient to make four fluid ounces; in this dissolve the sugar, and filter.

A VEGETABLE CURE FOR SYPHILIS.—*Editors Amer. Pract.:* Having lived my first century pretty well out, and thinking that I may some time or other die, I desire through your journal to make known to the medical public a discovery I made, many years ago, of a vegetable cure for syphilis. This is a tincture of datura stramonium and phytoacca decandra. Of the best proportions of the ingredients I am not now able to speak with confidence, but my recollection is that I made

the tincture of one ounce of the stramonium-seed and half a pound of the poke-root to two quarts of common whisky. I am sure I have in the last fifty years treated by this tincture twenty cases of syphilis, many of them of the worst form, with perfect success. It is proper to add that I got the hint of poke-root as a remedy in the disease as long ago as 1815, when I was a pupil in Dr. B. W. Dudley's office, at Lexington, where I saw it given successfully in the case of a negro man.

C. C. GRAHAM, M. D.

THE UNIVERSITY OF LOUISVILLE—COMMENCEMENT EXERCISES OF THE MEDICAL DEPARTMENT.—The Commencement exercises of the thirty-seventh annual session of this institution came off at Library Hall on Tuesday, March 3d. The Dean, Prof. J. M. Bodine, stated that upward of three hundred students had been in attendance on the lectures during the session, while the graduating class numbered one hundred and twenty-six, the largest ever turned out by the institution. The addresses delivered on the occasion will be found in the supplement. The following is the "roll of honor," which we find in the *Courier-Journal*:

The Faculty gold medal for the best thesis was won by Dr. A. R. Booth, of Louisiana. Drs. W. G. Todd, Green Adams, J. S. Watson, E. H. Kaye, J. E. Harbold, J. G. Bohannon, F. O. Young, J. W. Wooldridge, H. H. Beck, H. B. Davis, M. A. Frawley, and A. B. Applegate received honorable mention.

The Shirley gold medal for the best thesis on public and private hygiene was awarded to Dr. Thomas P. Grant, of Kentucky. Drs. W. H. Henry and B. F. Spencer, also of Kentucky, received honorable mention.

The Hite gold medal for the best notes on the lectures of Prof. L. P. Yandell, jr., on clinical medicine was awarded to Dr. Albert A. Marrett, of Kentucky. Honorable mention of Dr. J. W. Wooldridge, Dr. Busey, and Mr. Coblenz, a first-course student.

The prize, a case of obstetrical instruments, offered by Professor Crowe for the best thesis on puerperal fever, was so evenly contested for by Dr. Isaac F. Holman, of Mississippi, and Dr. Alexander F.

Bueren, of Kentucky, that it was deemed just to duplicate the honor. A prize was thus awarded to each of the two competitors. Dr. John Kelly, of Kentucky, Dr. W. O. Harris, of Mississippi, Dr. Isaac L. Splawn, of Louisiana, and Dr. H. R. Boswell, of Alabama, received honorable mention.

The prize, a case of amputating instruments, offered by Mr. S. N. Jones, a well-known pharmacist of this city, to that member of the class who should stand the best examination in anatomy, was awarded to Dr. Isaac L. Splawn, of Louisiana.

Messrs. Arthur Peter & Fitch, wholesale druggists of this city, offered a fine case of pocket instruments to the member of the class who should stand the best examination in physiology. For this prize there were twenty-five contestants. The examination was a written one, and of the whole number two were so perfectly equal to each other that a decision could not be made between them. The two thus tied were Dr. W. G. Todd, of Kentucky, and Dr. James S. Watson, of Texas. Upon a second written examination the result was the same as that of the first. Prof. Palmer removed the difficulty by duplicating the prize. To Drs. Todd and Watson was therefore awarded for the best standing in physiology each a pocket-case of instruments. Honorable mention was made of the following gentlemen: Dr. A. F. Bueren, of Kentucky; Dr. I. L. Splawn, of Louisiana; and Mr. A. E. Neat, of Indiana, for the excellence of their examinations in physiology.

The prize offered by Mr. S. N. Jones for the best standing in Professor Cowling's class on operative surgery was awarded to Dr. G. F. Stewart, of Tennessee. Dr. A. R. Booth, of Louisiana, received honorable mention.

The prize offered by John P. Morton & Co. for the best notes on the lectures of Professor D. W. Vandell on clinical surgery was awarded to Dr. Tibbs Taylor, of Kentucky.

**A MOVE IN THE RIGHT DIRECTION.**—The following act to regulate the sale of medicines and poisons was recently passed by the legislature of Kentucky:

**SEC. 1.** It shall be unlawful for any person, unless a registered pharmacist, or registered assistant pharmacist in the employ of a registered pharmacist, or unless acting as an aid under the immediate supervision of a registered pharmacist or a registered assistant

pharmacist, within the meaning of this act, to retail, compound, or dispense medicines or poisons except as hereinafter provided.

SEC. 2. Any person, in order to be a registered pharmacist or a registered assistant pharmacist in the meaning of this act, shall be either a graduate in pharmacy, a practicing pharmacist, or a practicing assistant in pharmacy. Graduates in pharmacy shall be such as have obtained a diploma from a regularly incorporated college of pharmacy. Practicing pharmacists shall be such persons as at or prior to the passage of this act have kept and continue to keep open shops for compounding and dispensing the prescriptions of medical practitioners and for the retailing of drugs and medicines, and who shall have declared their intentions in writing of keeping open shops for the compounding of prescriptions of medical practitioners and the retailing of drugs and medicines; and all other persons who after the passage of this act shall have declared their intentions in writing to open a shop for compounding and dispensing the prescriptions of medical practitioners and for retailing of drugs and medicines, and shall have passed a satisfactory examination before the State Board of Pharmacy. Practicing assistants in pharmacy shall be such persons as shall have served five years immediately preceding the passage of this act in a shop or shops where the prescriptions of medical practitioners are compounded; and such other persons as have served three years' apprenticeship in a shop or shops where the prescriptions of medical practitioners are compounded, and shall have passed a satisfactory examination before the State Board of Pharmacy.

SEC. 3. The State Board of Pharmacy shall consist of seven persons, and immediately after the passage of this act the governor shall appoint from among the most skillful pharmacists of the state the first Board of Pharmacy; and on the first day of July of every third year thereafter the governor shall appoint the State Board of Pharmacy from the registered pharmacists of the state, the Louisville College of Pharmacy to recommend to the governor ten persons, members of said College of Pharmacy, four of whom shall be appointed on the State Board of Pharmacy. All vacancies by death, resignation, or removal from the state shall be filled by the board from the registered pharmacists of the state.

SEC. 4. Four members of said board shall constitute a quorum. Said board shall organize by the election of a president and secretary, both of whom shall sign all certificates and other official



documents. Said board shall meet twice a year, on the 15th day of January and on the 15th day of July, and shall have power to make by-laws and all necessary regulations for the proper fulfillment of their duties under this act. The secretary of said board shall also be registrar of pharmacists. The duties of said board shall be to examine all applicants for registration, to direct the registration by the registrar of all persons properly qualified or entitled thereto, and report annually to the General Assembly on the condition of pharmacy, together with the names of all registered pharmacists and assistant pharmacists.

SEC. 5. The duties of the registrar of pharmacists shall be to keep a book in which shall be entered, under the supervision of the State Board of Pharmacy, the name and place of business of every person who shall apply for registration. It shall also be the duty of the registrar to duly note the fact against the name of any registered pharmacist or assistant pharmacist who may have died or removed from the state or disposed of or relinquished his business, and to make all necessary alterations in the location of persons registered under this act.

SEC. 6. Every person applying for examination and registration under this act shall pay to the State Board of Pharmacy five dollars, and on passing the examination required shall be furnished, free of expense, with a certificate of registration. Any registered assistant pharmacist may, with the consent of said board, be entitled to registration as a registered pharmacist, and shall be furnished with a certificate of registration, for which certificate he shall pay the registrar one dollar. Every registered pharmacist and registered assistant pharmacist shall be furnished by the registrar of pharmacists with a renewal certificate annually, for which renewal certificate he shall pay one dollar.

SEC. 7. Any person not a registered pharmacist who shall after the passage of this act keep open shop for the retailing of medicines and poisons, or who shall take, use, or exhibit the title of registered pharmacist, or any person who shall violate any of the provisions of this act, shall upon the first conviction be sentenced to pay a fine of fifty dollars, and upon the second and every subsequent conviction shall be sentenced to pay a fine of one hundred dollars.

SEC. 8. The fees received for examination, registration, certificates, and renewal certificates, and all fines under this act, shall

be appropriated to defray the expenses of the State Board of Pharmacy.

SEC. 9. This act shall not apply to any town or city of less than five thousand inhabitants.

SEC. 10. Nothing in this act shall be construed to apply to any practitioner of medicine who does not keep open shop for compounding and dispensing medicines, nor shall it interfere with the making and dealing in proprietary medicines (popularly called patent medicines).

SEC. 11. This act to take effect on and after its passage.

THE LAST THING A PHYSICIAN LEARNS.—Dr. Pitcairn, who was the owner of the "Gold-headed Cane" immediately before Baillie, was said to be perfectly candid in his opinions, and very frank in acknowledging the extent of his confidence in the efficacy of medicine. To a young friend who had very recently graduated, and who had accompanied him from London to visit a lady, ill of a consumption, in the country, and who on their return was expressing his surprise at the apparent inertness of the prescription which had been left behind (which was nothing more than infusion of roses, with a little additional mineral acid), he made this reply: "The last thing a physician learns in the course of his experience is to know when to do nothing, but quietly to wait and allow nature and time to have fair play in checking the progress of disease, and gradually restoring the strength and health of the patient."